FIG.1

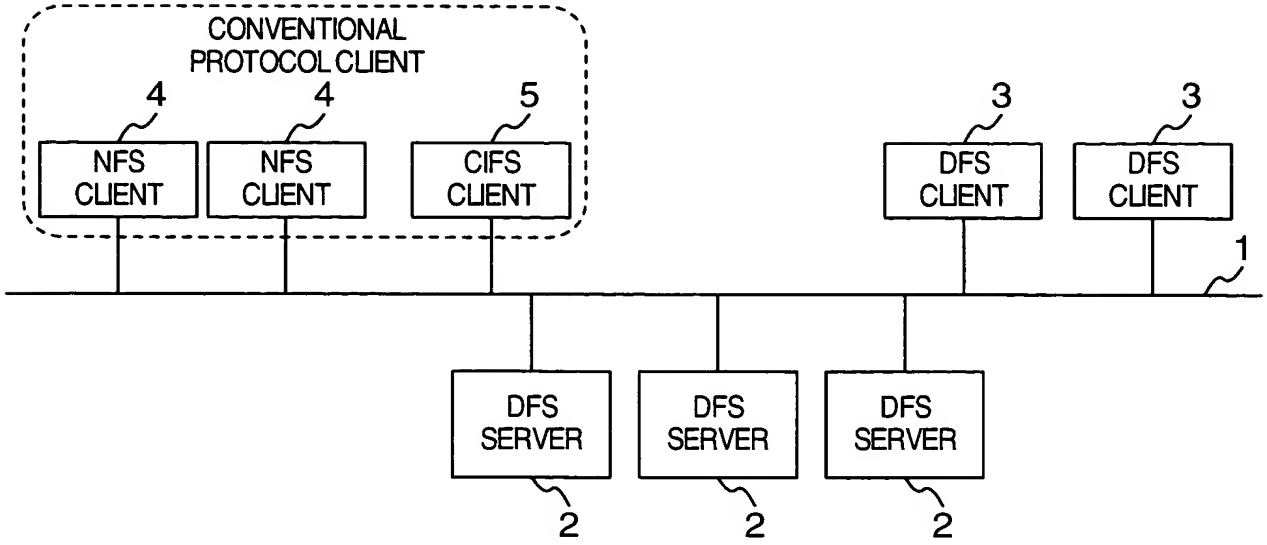


FIG.2

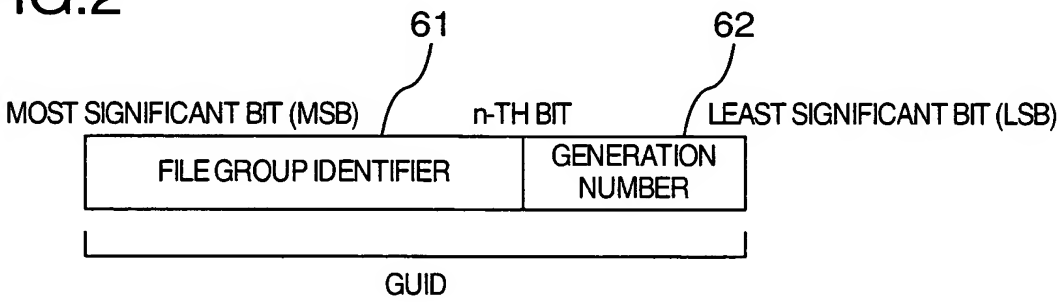


FIG.3

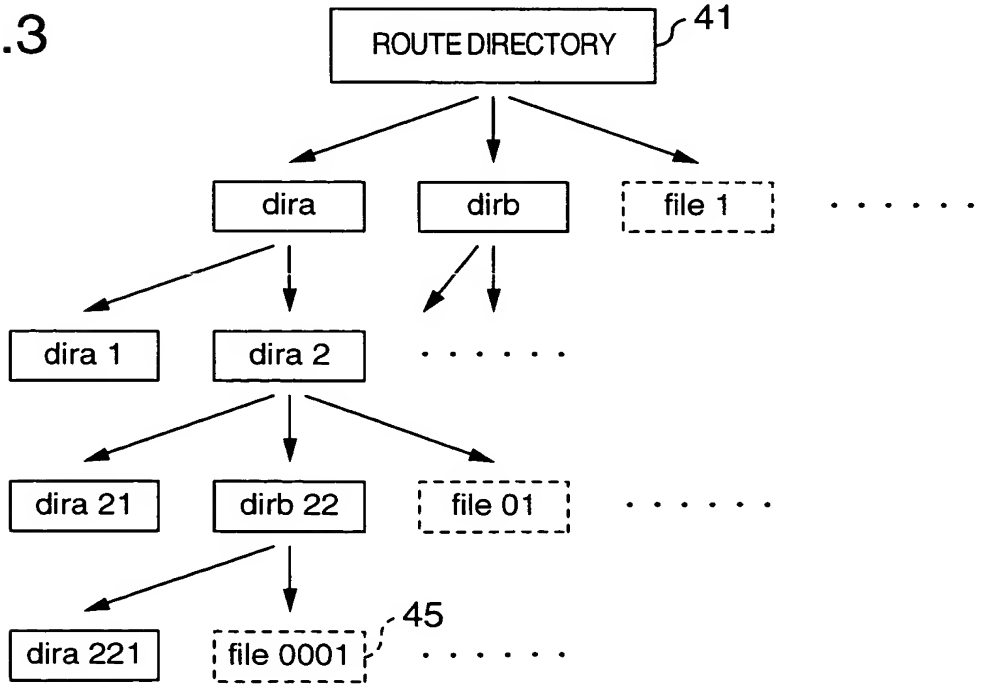


FIG.4

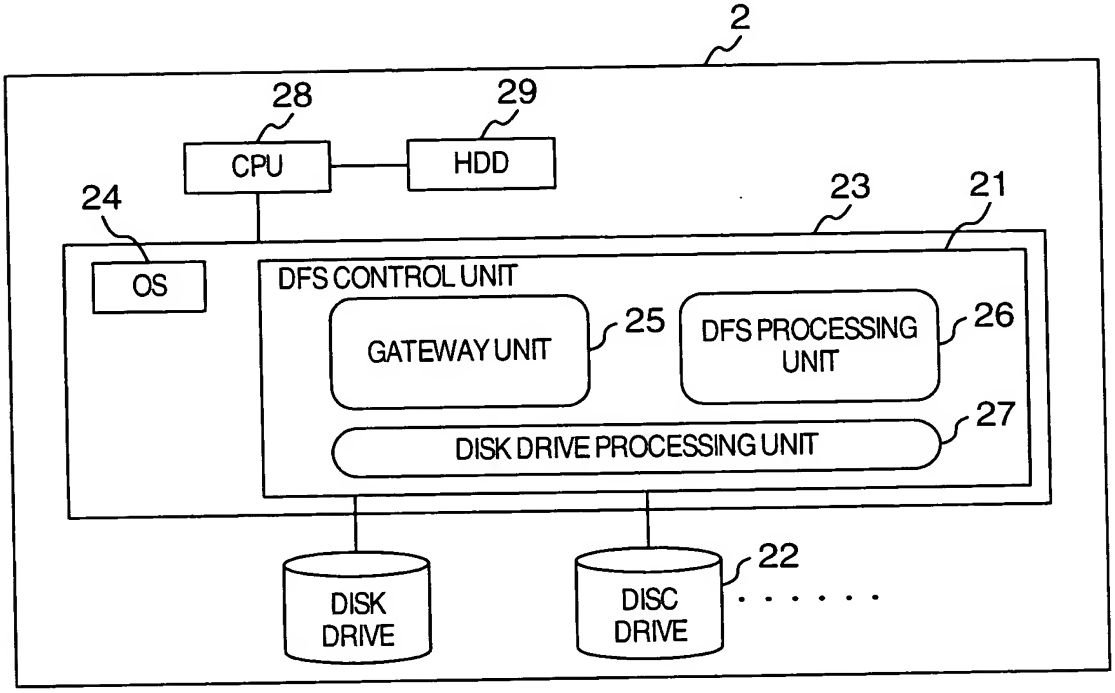

2
28
29
CPU
HDD
24
23
21
OS
DFS CONTROL UNIT
GATEWAY UNIT
25
DFS PROCESSING UNIT
26
27
DISK DRIVE PROCESSING UNIT
22
DISK DRIVE
DISC DRIVE

FIG.5

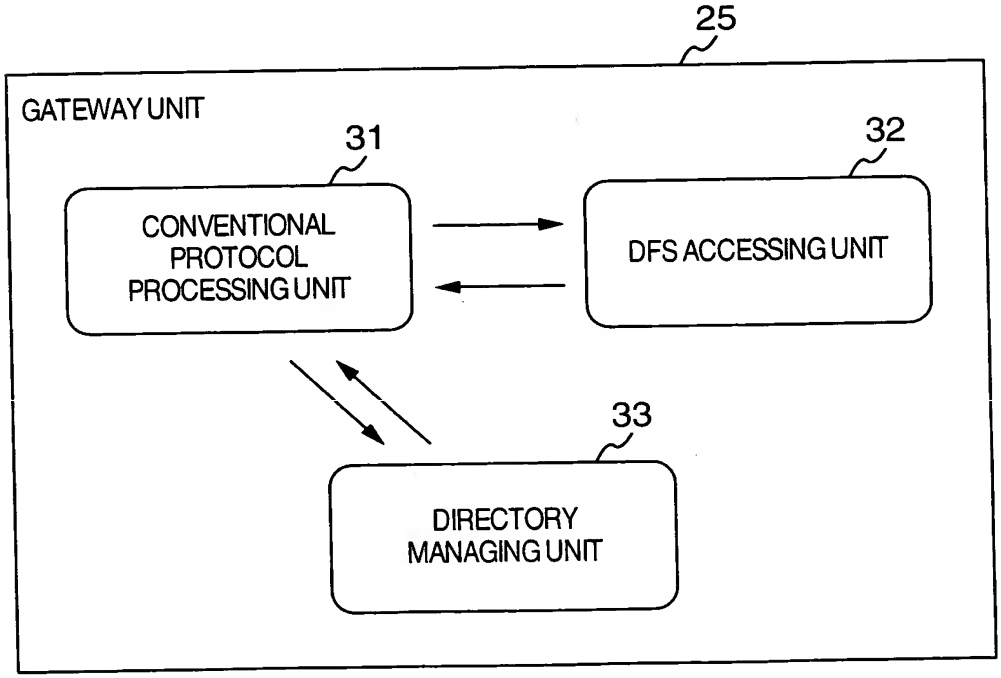

25
GATEWAY UNIT
31
32
CONVENTIONAL PROTOCOL PROCESSING UNIT
DFS ACCESSING UNIT
33
DIRECTORY MANAGING UNIT

FIG.6

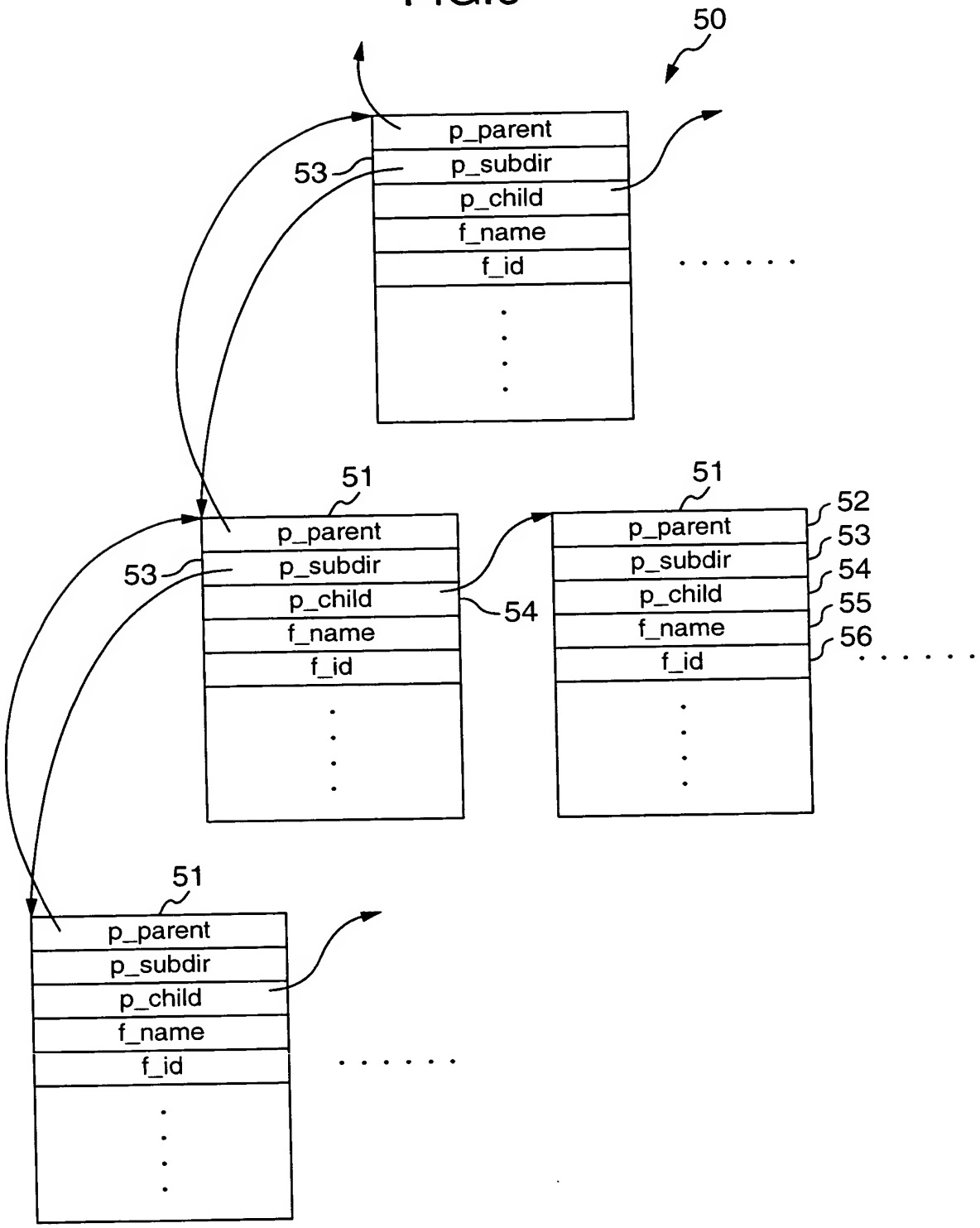

50
p_parent
p_subdir
p_child
f_name
f_id
53
51
p_parent
p_subdir
p_child
f_name
f_id
53
54
51
p_parent
p_subdir
p_child
f_name
f_id
52
53
54
55
56
51
p_parent
p_subdir
p_child
f_name
f_id

FIG.7

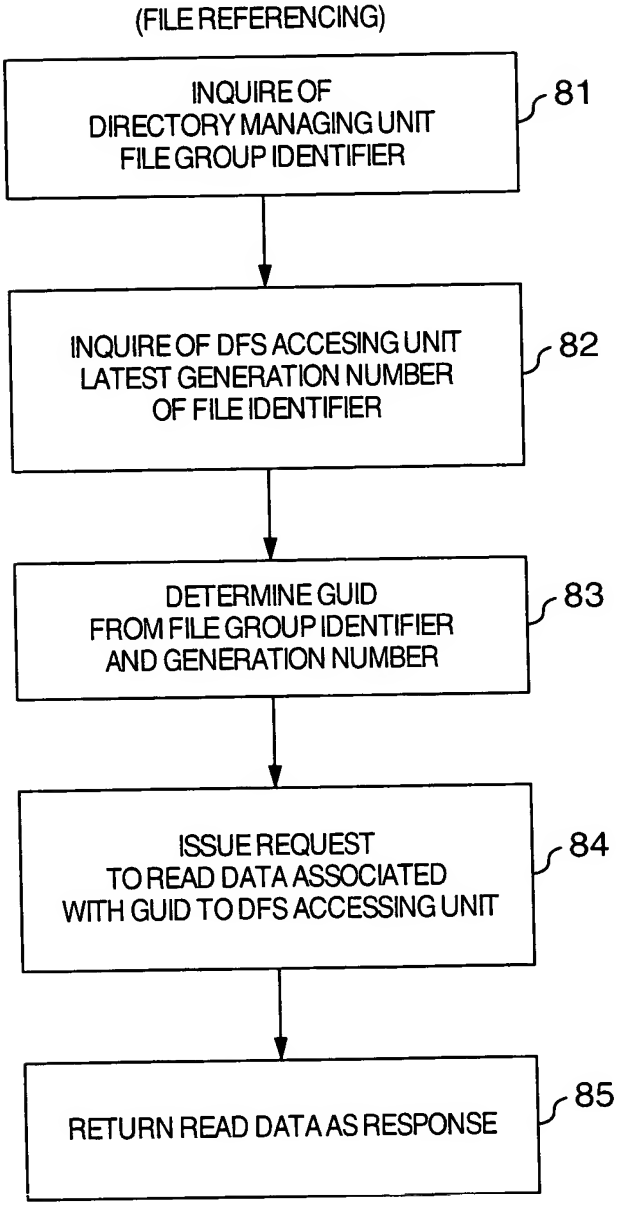

(FILE REFERENCING)
INQUIRE OF DIRECTORY MANAGING UNIT FILE GROUP IDENTIFIER
81
INQUIRE OF DFS ACCESING UNIT LATEST GENERATION NUMBER OF FILE IDENTIFIER
82
DETERMINE GUID FROM FILE GROUP IDENTIFIER AND GENERATION NUMBER
83
ISSUE REQUEST TO READ DATA ASSOCIATED WITH GUID TO DFS ACCESSING UNIT
84
RETURN READ DATA AS RESPONSE
85

FIG.8

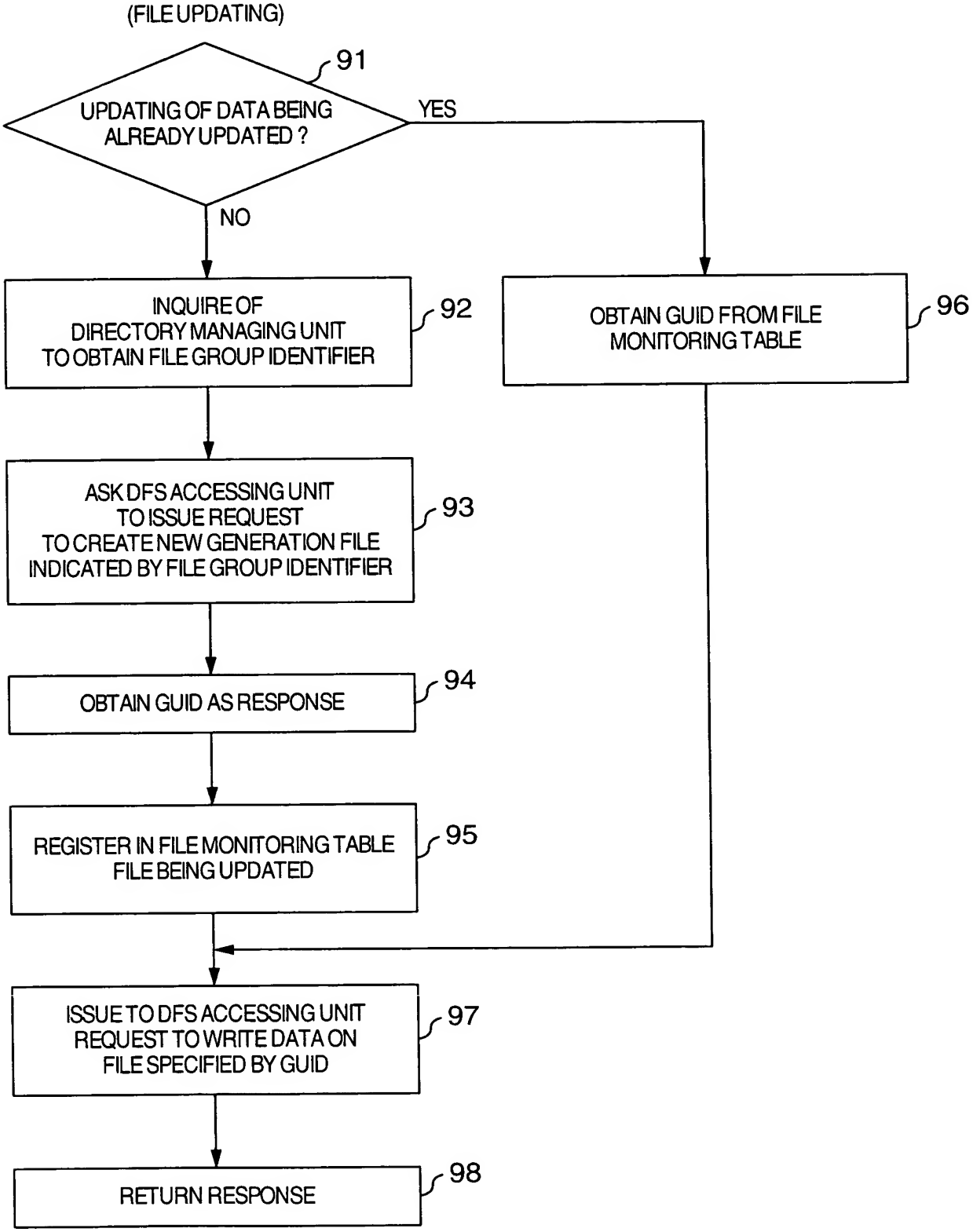

(FILE UPDATING)
91
UPDATING OF DATA BEING ALREADY UPDATED ?
YES
NO
INQUIRE OF DIRECTORY MANAGING UNIT TO OBTAIN FILE GROUP IDENTIFIER
92
OBTAIN GUID FROM FILE MONITORING TABLE
96
ASK DFS ACCESSING UNIT TO ISSUE REQUEST TO CREATE NEW GENERATION FILE INDICATED BY FILE GROUP IDENTIFIER
93
OBTAIN GUID AS RESPONSE
94
REGISTER IN FILE MONITORING TABLE FILE BEING UPDATED
95
ISSUE TO DFS ACCESSING UNIT REQUEST TO WRITE DATA ON FILE SPECIFIED BY GUID
97
RETURN RESPONSE
98

FIG.9

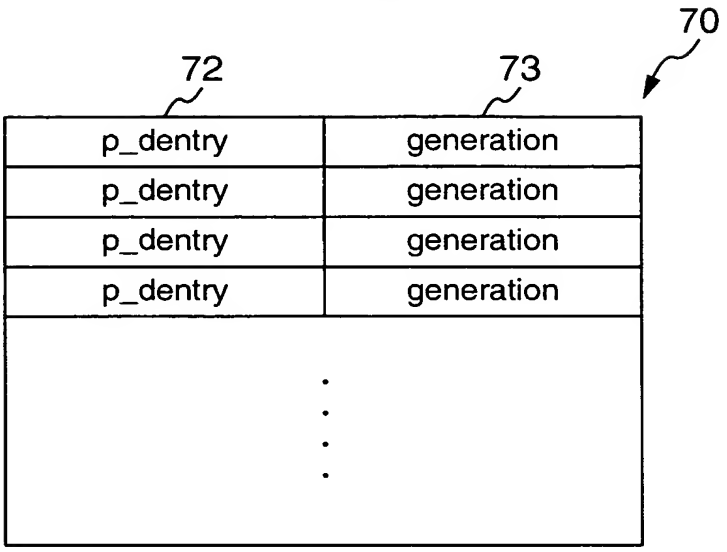

70
72
73
p_dentry
generation
p_dentry
generation
p_dentry
generation
p_dentry
generation

FIG.10

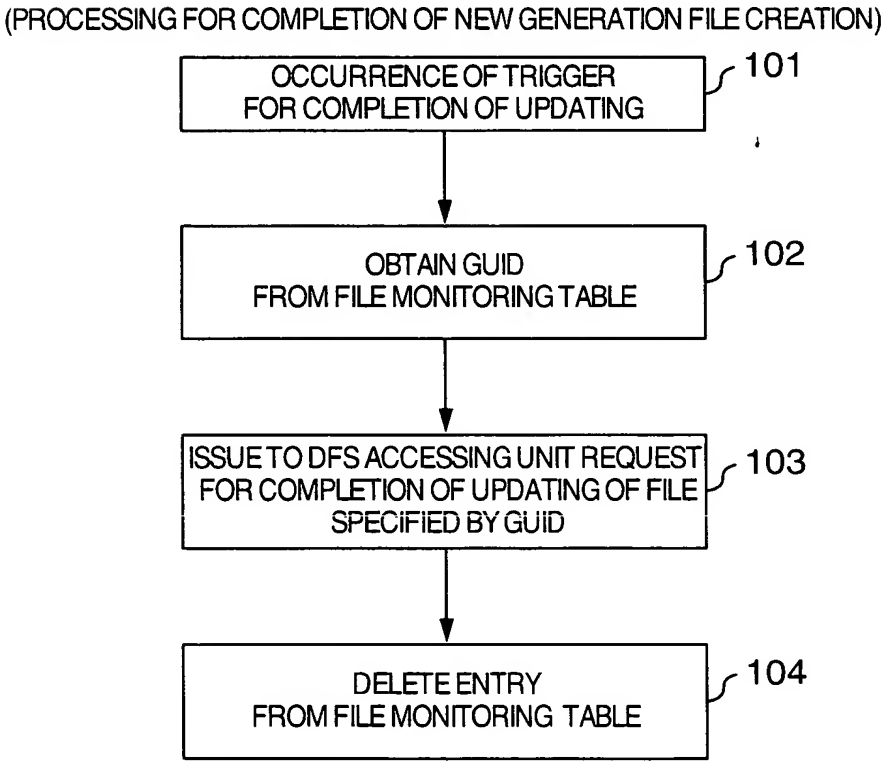
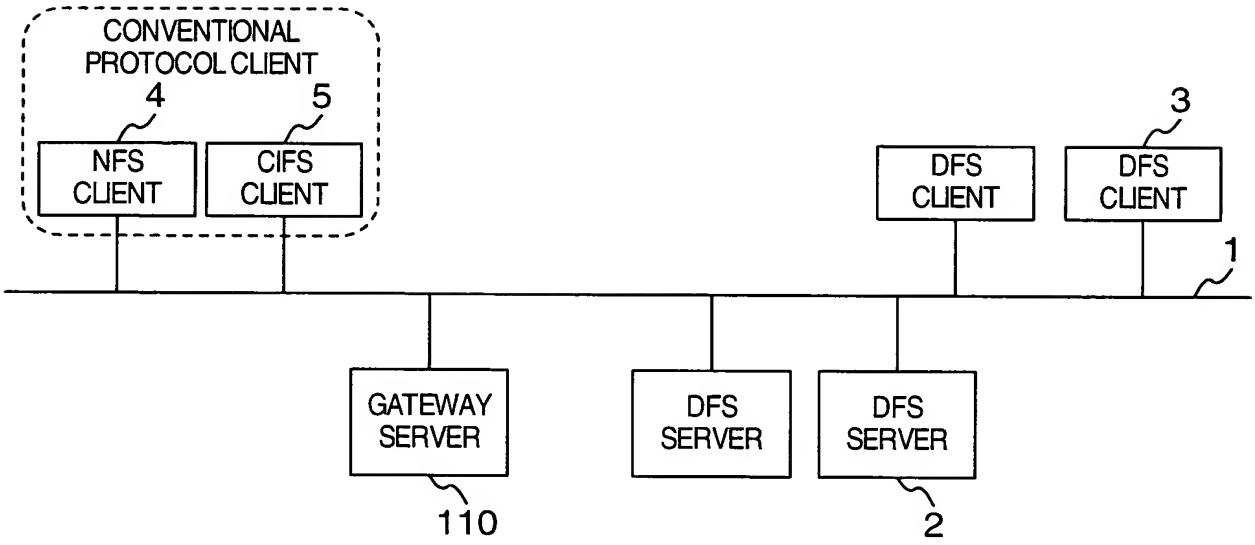

(PROCESSING FOR COMPLETION OF NEW GENERATION FILE CREATION)
OCCURRENCE OF TRIGGER FOR COMPLETION OF UPDATING
101
OBTAIN GUID FROM FILE MONITORING TABLE
102
ISSUE TO DFS ACCESSING UNIT REQUEST FOR COMPLETION OF UPDATING OF FILE SPECIFIED BY GUID
103
DELETE ENTRY FROM FILE MONITORING TABLE
104

FIG.11


CONVENTIONAL PROTOCOL CLIENT
4
5
NFS CLIENT
CIFS CLIENT
3
DFS CLIENT
DFS CLIENT
1
GATEWAY SERVER
110
DFS SERVER
DFS SERVER
2